AMENDMENTS TO THE CLAIMS

The following claims replace all previous versions and listings of claims in the present patent application.

Listing of Claims

Claims 1-9 (cancelled)

10. (currently amended) A system, comprising:

a submersible actuator, comprising:

a first housing having an electric motor disposed in a first pressurized fluid; and

a second housing having a control circuit disposed in a second pressurized fluid, wherein the second pressurized fluid is different from the first pressurized fluid, the control circuit is coupled to the electric motor, and the control circuit is configured to communicate with a remote control station.

11. (currently amended) The system of claim 10, wherein the second pressurized fluid is a pressurized gas.

12. (previously presented) The system of claim 10, wherein the submersible actuator comprises another electric motor coupled to the control circuit, and the control circuit is configured to control the electric motors independent from one another.

13. (currently amended) The system of claim 12, wherein the electric motors are independently drivingly coupled to a drive shaft via a transmission, wherein the transmission comprises a transmission shaft, a worm screw coupled to the transmission shaft, and a sprocket coupled to the worm screw and the drive shaft, wherein the electric motors are coupled to the transmission shaft.

14. (currently amended) The system of claim ~~13~~10, wherein the control circuit is configured to compare a value of a control signal with an average of a predetermined number of previous control signals ~~the transmission comprises a transmission shaft, a worm screw coupled to the transmission shaft, and a sprocket coupled to the worm screw and the drive shaft, wherein the electric motors are coupled to the transmission shaft~~.

15. (currently amended) The system of claim 10, comprising a ~~pressure balancing device~~membrane accumulator coupled to the submersible actuator and configured to balance internal and external pressures.

16. (currently amended) The system of claim ~~13~~10, wherein the control circuit is configured to control the electric motor based on feedback indicative of a current absorbed by the electric motor~~the pressure balancing device is coupled to the first housing and is configured to balance internal and external pressures of a liquid~~.

17. (currently amended) The system of claim 10, wherein the first pressurized fluid is ~~an oil~~a pressurized lubricating liquid and the second pressurized fluid is ~~nitrogen~~an inert gas.

18. (previously presented) The system of claim 10, comprising a flow control mechanism coupled to the submersible actuator.

19. (currently amended) The system of claim ~~18~~10, wherein the control circuit is configured to control a speed value and a direction for rotation of the electric motor based on a target shaft position and a current shaft position sensed by a position sensor ~~the flow control mechanism comprises a valve, or a pipeline, or a combination thereof~~.

20. (previously presented) A method, comprising:

pneumatically pressurizing a control circuit in a first enclosure portion of a submersible actuator; and

hydraulically pressurizing at least one electric motor in a second enclosure portion of the submersible actuator, wherein the control circuit is coupled to the at least one electric motor.

21. (previously presented) The method of claim 20, comprising receiving an electrical control signal from a remote control station, processing the electrical control signal in the control circuit, and triggering the electric motor to actuate a submerged flow control mechanism.

22. (previously presented) The method of claim 20, wherein the at least one electric motor comprises first and second electric motors, and the method further comprises independently controlling the first and second electric motors to enable independent actuation of a submerged flow control mechanism.

23. (new) The method of claim 20, wherein pneumatically pressurizing comprises inertly pressurizing the control circuit in the first enclosure with a pressurized inert gas.

24. (new) The method of claim 20, comprising controlling the submersible actuator based on a target position, feedback, and historical data associated with the submersible actuator.

25. (new) The method of claim 20, comprising controlling a speed value and a direction for rotation of the at least one electric motor based on a target shaft position and a current shaft position sensed by a position sensor.

26. (new) The method of claim 20, comprising controlling the submersible actuator based on a first feedback indicative of an actuator position and a second feedback indicative of an absorbed current.

27. (new) A system, comprising:

a submersible actuator, comprising:

a first container filled with a liquid;

a second container filled with an inert gas;

an electric motor disposed in the first container; and

a control circuit disposed in the second container, wherein the control circuit is configured to control the electric motor to actuate a submarine device.

28. (new) The system of claim 27, wherein the submersible actuator comprises a worm gear coupled to the electric motor.

29. (new) The system of claim 27, wherein the control circuit is configured to adjust a speed of the electric motor based on a current position and a target position of the submarine device.

30. (new) The system of claim 27, wherein the control circuit is configured to control the electric motor based on historical data associated with the actuation of the submarine device.

31. (new) The system of claim 27, wherein the control circuit is configured to control the electric motor based on feedback indicative of a current absorbed by the electric motor.

32. (new) The system of claim 27, comprising a visual recognition device and a robot interface coupled to the submersible actuator, wherein the visual recognition device enables viewing of an actuation position associated with the submarine device, and the robot interface enables a robot to control the submersible actuator.